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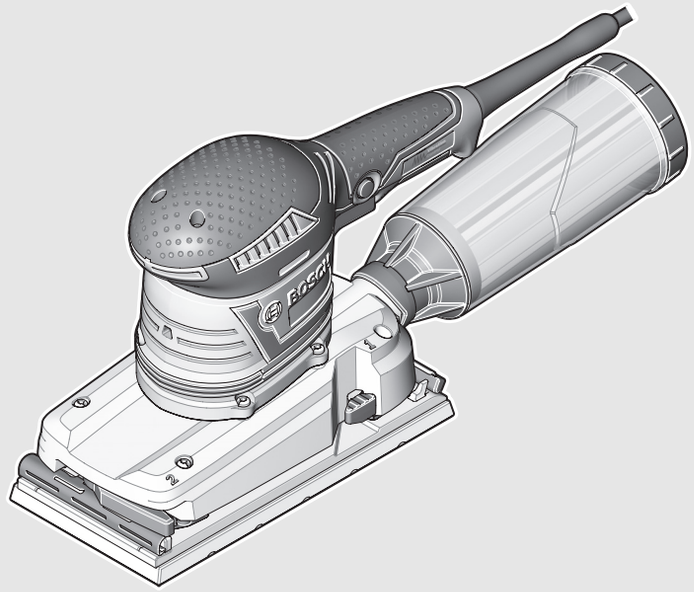

Robert Bosch GmbH
Power Tools Division
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Germany

www.bosch-pt.com

2 609 932 841 (2012.07) O / 163 **UNI**

2 609 932 841

GSS

230 AVE | 280 AVE

BOSCH

de Originalbetriebsanleitung
en Original instructions
fr Notice originale
es Manual original
pt Manual original
it Istruzioni originali
nl Oorspronkelijke gebruiksaanwijzing
da Original brugsanvisning
sv Bruksanvisning i original
no Original driftsinstruks
fi Alkuperäiset ohjeet
el Πρωτότυπο οδηγιών χρήσης
tr Orijinal işletme talimatı
pl Instrukcja oryginalna
cs Původní návod k používání
sk Pôvodný návod na použitie
hu Eredeti használati utasítás
ru Оригинальное руководство по эксплуатации
uk Оригінальна інструкція з експлуатації
ro Instrucţiuni originale
bg Оригинална инструкция
sr Originalno uputstvo za rad
sl Izvirna navodila
hr Originalne upute za rad
et Algupärane kasutusjuhend
lv Instrukcijas oriģinālvalodā
lt Originali instrukcija
ar تعليمات التشغيل الأصلية
fa راهنمای طرز کار اصلی

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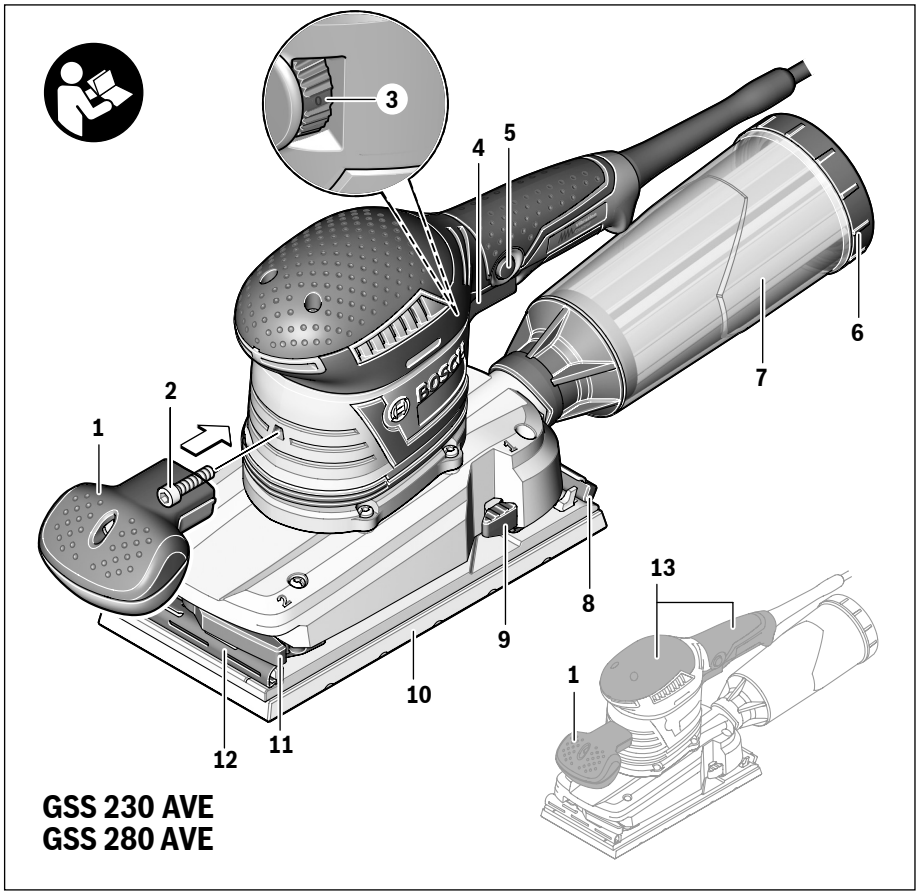

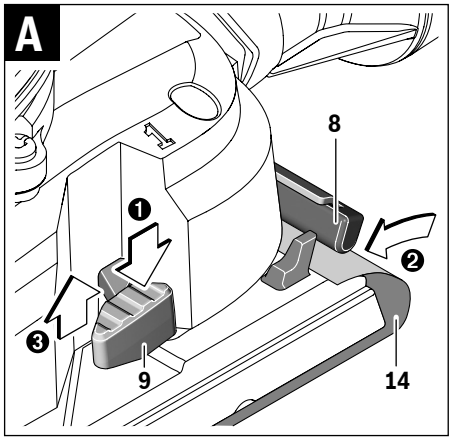

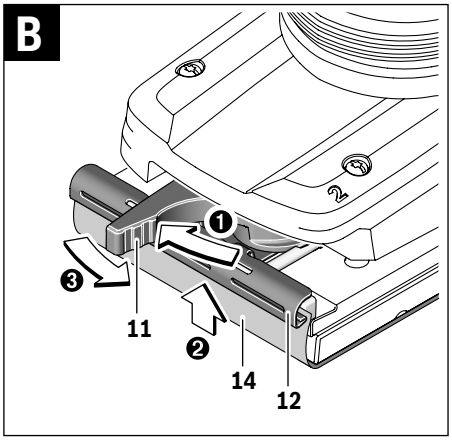

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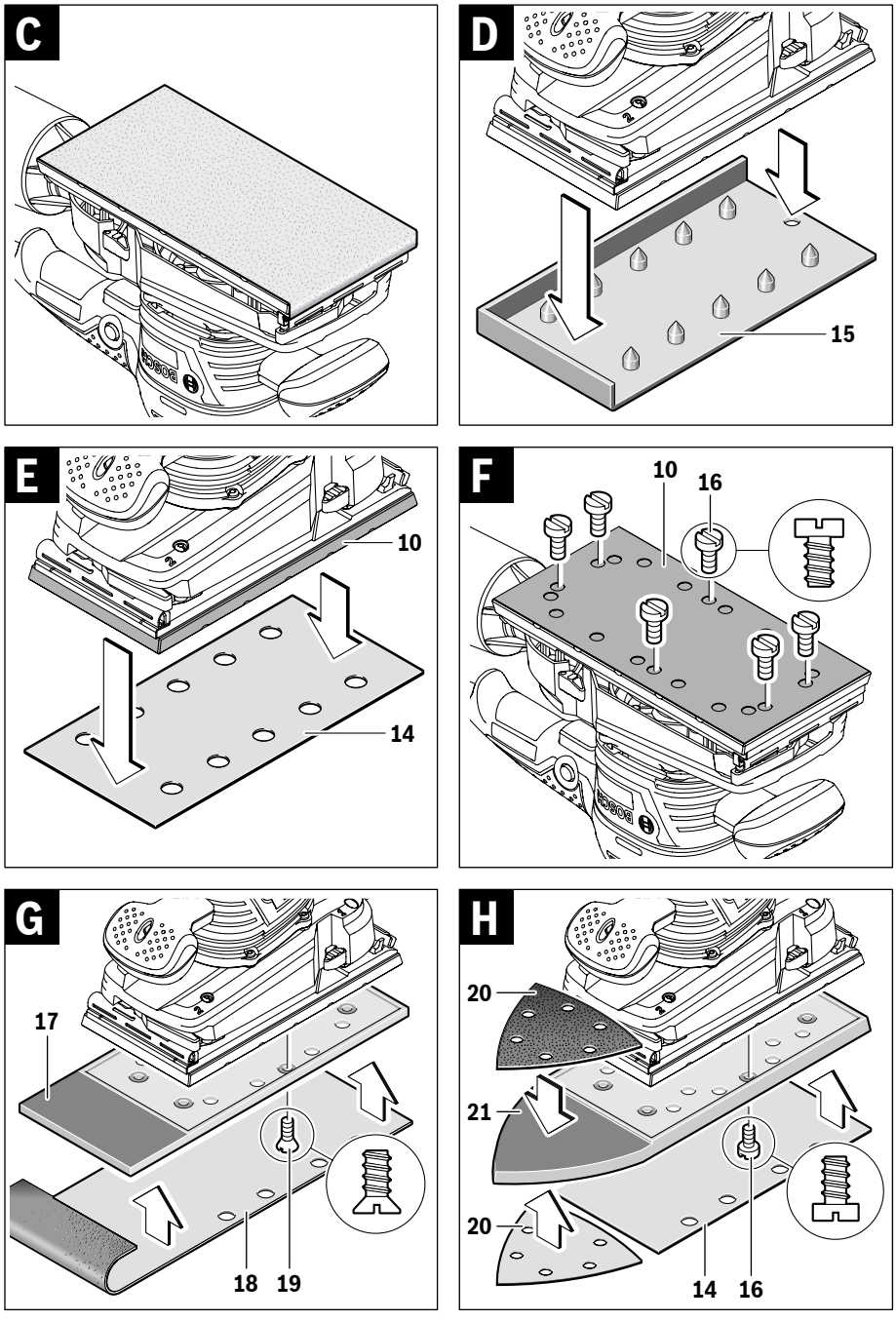

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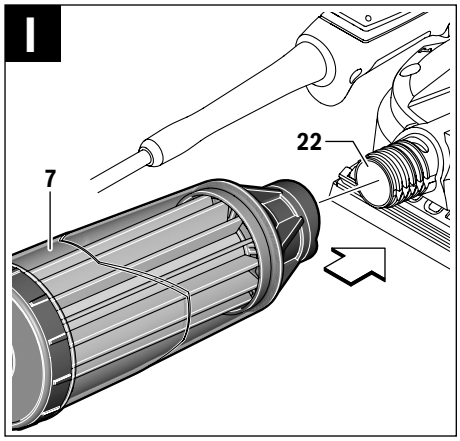

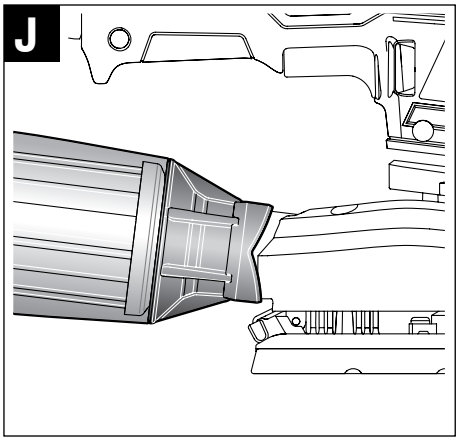

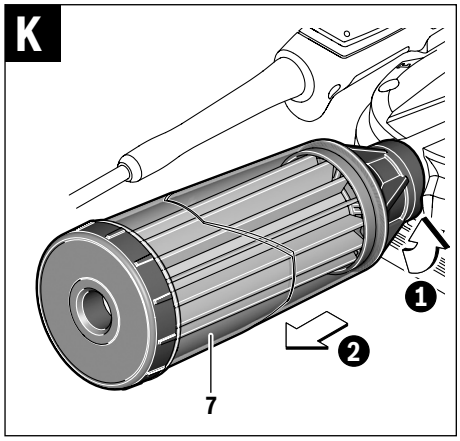

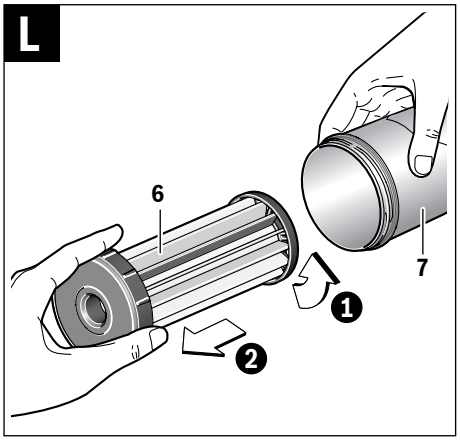

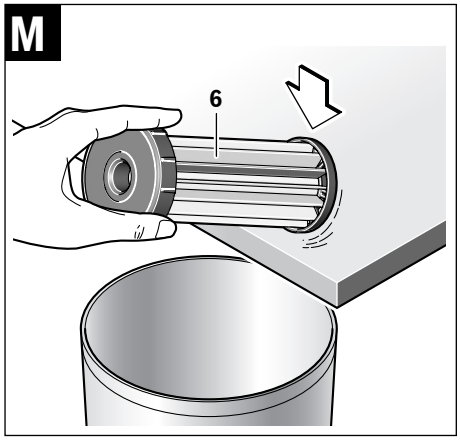

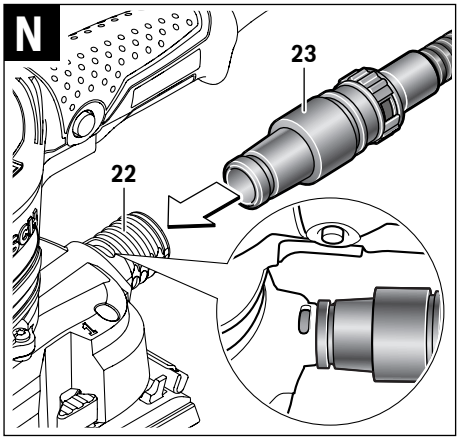

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www.powertool-portal.de, das Internetportal für Handwerker und Heimwerker.
www.ewbc.de, der Informations-Pool für Handwerk und Ausbildung.

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Entsorgung

Elektrowerkzeuge, Zubehör und Verpackungen sollen einer umweltgerechten Wiederverwertung zugeführt werden.

Werfen Sie Elektrowerkzeuge nicht in den Hausmüll!

Nur für EU-Länder:

Gemäß der Europäischen Richtlinie 2002/96/EG über Elektro- und Elektronik-Altgeräte und ihrer Umsetzung in nationales Recht müssen nicht mehr gebrauchsfähige Elektrowerkzeuge getrennt gesammelt und einer umweltgerechten Wiederverwertung zugeführt werden.

Änderungen vorbehalten.

English

Safety Notes

General Power Tool Safety Warnings

WARNING **Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

Personal safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

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- ▶ **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- ▶ **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- ▶ **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

- ▶ **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- ▶ **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- ▶ **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- ▶ **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- ▶ **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

- ▶ **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Safety Warnings for Sander

- ▶ **Use the machine only for dry sanding.** Penetration of water into the machine increases the risk of an electric shock.
- ▶ **Caution, fire hazard! Avoid overheating the object being sanded as well as the sander. Always empty the dust collector before taking breaks.** In unfavourable conditions, e. g., when sparks emit from sanding metals, sanding debris in the dust bag, micro filter or paper sack (or in the filter sack or filter of the vacuum cleaner) can self-ignite. Particularly when mixed with remainders of varnish, polyurethane or other chemical materials and when the sanding debris is hot after long periods of working.
- ▶ **When working with the machine, always hold it firmly with both hands and provide for a secure stance.** The power tool is guided more secure with both hands.
- ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.

Products sold in GB only: Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362).
If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.
The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.
Products sold in AUS and NZ only: Use a residual current device (RCD) with a rated residual current of 30 mA or less.

Product Description and Specifications

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

While reading the operating instructions, unfold the graphics page for the machine and leave it open.

Intended Use

The machine is intended for dry sanding of wood, plastic, filler and coated surfaces.

Product Features

The numbering of the product features refers to the illustration of the machine on the graphics page.

1 Auxiliary handle (insulated gripping surface)*
2 Screw for auxiliary handle*
3 Thumbwheel for orbit frequency preselection
4 On/Off switch
5 Lock-on button for On/Off switch
6 Filter element (Microfilter System)
7 Dust box, complete (Microfilter System)
8 Clamping bracket, rear
9 Clamping lever, left side
10 Sanding plate
11 Clamping lever, front
12 Clamping bracket, front
13 Handle (insulated gripping surface)
14 Sanding sheet*
15 Perforating tool*
16 Screws for sanding plate
17 Sanding plate, thin, extended*

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18 Sanding plate, extended*
19 Screws for extended sanding plate*
20 Triangular sanding sheet*
21 Triangular sanding plate, extended*
22 Extraction outlet
23 Vacuum hose*

***Accessories shown or described are not part of the standard delivery scope of the product. A complete overview of accessories can be found in our accessories program.**

Technical Data

Orbital sander	GSS ...	230 AVE	280 AVE
Article number		3 601 B92 8..	3 601 B92 9..
Dust box included in delivery scope		●	●
Preselection of orbital stroke rate		●	●
Rated power input	W	300	350
No-load speed	min^{-1}	8 000 – 11 000	8 000 – 11 000
No-load orbital stroke rate	min^{-1}	16 000 – 22 000	16 000 – 22 000
Orbit diameter	mm	2.4	2.4
Sanding sheet dimensions			
— Adhesion via Velcro backing	mm	93 x 185	115 x 230
— Attachment via clamping	mm	93 x 230	115 x 280
Sanding plate dimensions	mm	92 x 182	114 x 226
Weight according to EPTA-Procedure 01/2003	kg	2.5	2.8
Protection class		⧈/II	⧈/II

The values given are valid for a nominal voltage [U] of 230 V. For different voltages and models for specific countries, these values can vary.

Noise/Vibration Information

GSS ...		230 AVE	280 AVE
Typically the A-weighted noise levels of the product are			
Sound pressure level	dB(A)	80	86
Sound power level	dB(A)	91	97
Uncertainty K =	dB	3	3
Wear hearing protection!			
Vibration total values a_h (triax vector sum) and uncertainty K determined according to EN 60745:			
a_h	m/s^2	2.5	2.5
K	m/s^2	1.5	1.5

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.
The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.
An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.
Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep hands warm, organise work patterns.

Declaration of Conformity CE

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardization documents: EN 60745 according to the provisions of the directives 2011/65/EU, 2004/108/EC, 2006/42/EC.

Technical file (2006/42/EC) at:
Robert Bosch GmbH, PT/ETM9,
D-70745 Leinfelden-Echterdingen

Dr. Egbert Schneider	Helmut Heinzelmann
Senior Vice President	Head of Product Certification
Engineering	PT/ETM9

ppa. i.V.

Robert Bosch GmbH, Power Tools Division
D-70745 Leinfelden-Echterdingen
11.05.2012

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Assembly

▶ **Before any work on the machine itself, pull the mains plug.**

Dust/Chip Extraction

▶ Dusts from materials such as lead-containing coatings, some wood types, minerals and metal can be harmful to one's health. Touching or breathing-in the dusts can cause allergic reactions and/or lead to respiratory infections of the user or bystanders.
Certain dusts, such as oak or beech dust, are considered as carcinogenic, especially in connection with wood-treatment additives (chromate, wood preservative). Materials containing asbestos may only be worked by specialists.
– As far as possible, use a dust extraction system suitable for the material.
– Provide for good ventilation of the working place.
– It is recommended to wear a P2 filter-class respirator.
Observe the relevant regulations in your country for the materials to be worked.

▶ **Prevent dust accumulation at the workplace.** Dusts can easily ignite.

Integrated Dust Extraction with Dust Box (see figures I – M)

Mount the dust box **7** onto the extraction outlet **22**. Turn the dust box in such a manner that its recesses face against the tips on the extraction outlet and the dust box can be felt to engage.

The filling level of the dust box **7** can easily be checked through the transparent container.

To empty the dust box **7**, pull it off toward the rear with a slight twisting motion.

Screw the filter element **6** on and pull it out of the dust box **7**. Empty the dust box.

To loosen the dust, gently strike or tap the filter element **6** against a firm surface. Clean the lamellas of the filter element **6** with a soft brush.

Note: To ensure optimum dust extraction, empty the dust box **7** in good time and clean the filter element **6** at regular intervals.

When working vertical surfaces, hold the power tool in such a manner that the dust box **7** faces downward.

External Dust Extraction (see figure N)

Mount a vacuum hose **23** onto the extraction outlet **22**. Mount the vacuum hose onto the extraction outlet (as shown in the figure) in such a manner that the lateral openings on the extraction outlet remain free. This prevents the power tool from adhering to the workpiece during sanding and the surface quality of the workpiece from being impaired.

Connect the vacuum hose **23** to a vacuum cleaner (accessory). An overview for connecting to various vacuum cleaners can be found at the end of this manual.

The vacuum cleaner must be suitable for the material being worked.

When vacuuming dry dust that is especially detrimental to health or carcinogenic, use a special vacuum cleaner.

When working vertical surfaces, hold the power tool in such a manner that the vacuum hose faces downward.

Replacing the Sanding Sheet

When attaching a new sanding sheet, remove any dust or debris from the sanding plate **10** (e. g. with a brush).

To ensure optimum dust extraction, pay attention that the punched holes in the sanding sheet match with the holes in the sanding plate.

Sanding Sheets with Velcro Backing (see figure E)

The sanding plate **10** is fitted with Velcro backing for quick and easy fastening of sanding sheets with Velcro adhesion.

Before attaching the sanding sheet **14**, free the Velcro backing of the sanding plate **10** from any debris by tapping against it in order to enable optimum adhesion.

Position the sanding sheet **14** flush alongside one edge of the sanding plate **10**, then lay the sanding sheet onto the sanding plate and press firmly.

To remove the sanding sheet **14**, grasp it at one of the tips and pull it off from the sanding plate **10**.

Sanding Sheets without Velcro Backing (see figures A and B)

Press clamping lever **9** downward.

Guide the sanding sheet **14** to the stop under the opened rear clamping bracket **8** and release clamping lever **9**.

Open clamping lever **11**.

Fold the sanding sheet **14** firmly around the sanding plate. Guide the other end of the sanding sheet **14** under the opened front clamping bracket **12** and clamp the sanding sheet by releasing the clamping lever **11**.

Sanding sheets without holes, e. g. from rolls or by the meter, can be punctured with the perforating tool **15** for use with dust extraction. For this, press the machine with the mounted sanding sheet onto the perforating tool (see figure D).

To remove the sanding sheet **14**, open clamping lever **11** and push clamping lever **9** downward. Pull out the sanding sheet.

Selecting the Sanding Sheet

Depending on the material to be worked and the required rate of material removal, different sanding sheets are available:

		Grain size
best for Wood **For the working of all wooden materials**		**40 – 400**
For coarse-sanding, e. g. of rough, unplaned beams and boards	coarse	40, 60
For face sanding and planing small irregularities	medium	80, 100, 120
For finish and fine sanding of hard woods	fine	180, 240, 320, 400

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		Grain size
best for Paint **For the working of paint/enamel coats or primers and fillers**		**40 – 320**
For sanding off paint	coarse	40, 60
For sanding primer	medium	80, 100, 120
For final sanding of primers before coating	fine	180, 240, 320

Note: To avoid tearing of the sanding sheet, use only sanding sheets with a grain size of 80 or less.

Replacing the Sanding Plate (see figure F)

The sanding plate **10** can be replaced, if required.

Unscrew the 6 screws **16** completely and remove the sanding plate **10**. Attach the new sanding plate **10** and tighten the screws again.

Specialty Sanding Plates

You can replace the supplied sanding plate **10** with a specialty sanding plate, which is available as an accessory.

The specialty sanding plate is attached in the same manner as the one supplied.

Attach and remove the respective sanding sheets in the same manner as when changing original sanding sheets.

Extended Sanding Plate, Rectangular, Thin (see figure G)

Use of the rectangular, thin, extended sanding plate **17** enables sanding at hard-to-reach locations and narrow interspaces, e. g. on window and door sills, grooves or behind radiators or water pipes.

To mount the rectangular, thin, extended sanding plate **17**, use the corresponding screws **19**.

Extended Sanding Plate, Triangular (see figure H)

Use of the extended triangular sanding plate **21** enables sanding in edges and corners.

Finish-sanding Plate (without velcro backing) (see figures A and B)

When operating mainly with standard sanding sheets without velcro backing, it is recommended to use the finish-sanding plate without velcro backing. Due to its plane sanding plate surface, optimum results are achieved, especially for finish sanding.

Auxiliary Handle

The auxiliary handle **1** enables convenient handling and optimal distribution of power, especially at high removal rates.

Fasten the auxiliary handle **1** with screw **2** to the casing.

Operation

Starting Operation

- ▶ **Observe correct mains voltage! The voltage of the power source must agree with the voltage specified on the nameplate of the machine. Power tools marked with 230 V can also be operated with 220 V.**

Switching On and Off

To **start** the machine, press the On/Off switch **4** and keep it pressed.

To lock the **pressed** On/Off switch **4**, press the lock-on button **5**.

To **switch off** the machine, release the On/Off switch **4** or when it is locked with the lock-on button **5**, briefly press the On/Off switch **4** and then release it.

When not using the power tool, switch it off in order to save energy.

Preselecting the Orbital Stroke Rate

With the thumbwheel for preselection of the orbital stroke rate **3**, you can preselect the required orbital stroke rate, even during operation.

The required stroke rate depends on the material and the working conditions and can be determined through practical testing.

Working Advice

- ▶ **Wait until the machine has come to a standstill before placing it down.**

When sanding, the removal capacity is mainly determined by the sanding sheet selection as well as through the preselected orbital stroke rate.

Only flawless sanding sheets achieve good sanding capacity and extend the service life of the machine.

Pay attention to apply uniform sanding pressure; this increases the working life of the sanding sheets.

Intensifiying the sanding pressure does not lead to an increase of the sanding capacity, but to increased wear of the machine and the sanding sheet.

A sanding sheet that has been used for metal should not be used for other materials.

Use only original Bosch sanding accessories.

Maintenance and Service

Maintenance and Cleaning

- ▶ **Before any work on the machine itself, pull the mains plug.**
- ▶ **For safe and proper working, always keep the machine and ventilation slots clean.**

If the replacement of the supply cord is necessary, this has to be done by Bosch or an authorized Bosch service agent in order to avoid a safety hazard.

If the machine should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an after-sales service centre for Bosch power tools.

In all correspondence and spare parts order, please always include the 10-digit article number given on the type plate of the machine.